Journal of Management and Sustainability; Vol. 5, No. 1; 2015
ISSN 1925-4725 E-ISSN 1925-4733
Published by Canadian Center of Science and Education

A Cross-Sectoral Analysis of Environmental Disclosures in a Legitimacy Theory Context

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Received: November 26, 2014 Accepted: January 2, 2015 Online Published: February 20, 2015

doi:10.5539/jms.v5n1p20 URL: http://dx.doi.org/10.5539/jms.v5n1p20

Abstract

The purpose of this study is to extend organizational legitimacy arguments by analyzing the extent and content of environmental disclosures across sectors according to their environmental impact. For this purpose, the industrial sectors were sorted into three groups as high impact sectors, medium impact sectors and low impact sectors. In the legitimacy theory context, business in high impact industry sectors would be expected to give more attention and importance to environmental disclosures than business in medium and low impact industry sectors. In this context four testable dimensions of environmental disclosure were systematically analyzed and compared in this study: presence of environmental disclosure; presentation of environmental disclosure; location of environmental disclosure; environmental disclosure items. The sample of this study consisted of 223 companies quoted on Istanbul Stock Exchange. In order to carry out a cross-sectoral analysis of environmental disclosures, data were collected from annual reports and analyzed using content analysis. The results of this study fail to confirm legitimacy theory as an explicator of environmental disclosure in the Turkey case. The sample companies operating in medium impact sectors have a higher tendency to disclose environmental information and to provide a stand-alone environmental report and separate environmental section in their annual reports than companies in high and low impact sectors in Turkey.

Keywords: environmental disclosure, legitimacy theory, cross-sectoral anaysis, Turkey

1. Introduction

In the last few decades, there has been an increasing awareness about environmental issues amongst environmental groups, customers, regulators and society. In such a context, business have been regarded as the main contributors to pollution and other damage to the natural environment and, therefore, they have been faced the challenge of giving more consideration to the natural environment. Thus, to the extent that society was much more aware of the business activities' effect on the environment and pressures toward better environmental practices increased, environmental issues are acquiring greater strategic importance and business are trying to develop strategies which would respond to the pressure of institutional actors. These institutional actors are concerned with the way in which companies are responding to environmental issues, and have focused attention on the verification of environmental performance. Consequently, as a result of the increasing pressures on business to disseminate information about their environmental actions and impacts, businesses have tended to disclose more information about their environmental impacts.

In general, legitimacy theory suggests that social disclosure is a direct function of social pressure faced by organizations. The proponents of the theory (e.g., Lindblom, 1994; Patten, 1991, 1992, 2002; Hackston & Milne, 1996) argue that the demand for legitimacy systematically drives the extent of social and environmental disclosures (Cho & Roberts, 2010). Legitimacy theory has been extensively employed to explain the motivation for voluntary environmental disclosures by organizations (e.g., Dowling & Pfeffer, 1975; Patten, 1991, 1992; Lindblom, 1994; Deegan & Rankin, 1996; Lodhia, 2005). Organizational legitimacy theory predicts that corporations will do whatever they regard as necessary in order to maintain their image of a legitimate business with legitimate goals and methods of achieving it. Therefore, business may reduce environmental disclosures at some point or change the type of disclosure as and when they perceive shifts in legitimacy threats (De Villiers & Van Staden, 2006). Environmental disclosures can be used to repair legitimacy insofar as such disclosures address society's concerns and supposedly offset criticism and cultivate societal support. It is unquestionable to suggest that the extent to which companies are exposed to criticism or concern on environmental issues must vary by sector, by company and over time (Campbell, 2004).

Prior research (e.g., Deegan & Gordon, 1996; Hackston & Milne, 1996; Patten, 1992, 2002) shows that industry affects the societal pressure potentially faced by companies with environmental concerns (Cho & Roberts, 2010). Companies in industries that have a larger potential impact on the environment (environmentally sensitive industries) are conceived to be subject to greater pressures with respect to environmental concerns than firms from less environmentally sensitive industries. Furthermore due to their higher pollution tendency, environmentally sensitive industries are the subject of a wide range of environmental regulations and, consequently, companies belonging to these industries have to comply with more rigorous requirements. In this sense, it is generally assumed that the extent and content of environmental disclosure differs from industry to industry and companies from environmentally sensitive industries tend to disclose more environmental information than companies in non-environmentally-sensitive industries (Hackston & Milne, 1996; Deegan & Gordon, 1996; Moneva & Llena, 2000; Campbell, 2003; Gao et al., 2005; Cho & Patten, 2007; Brammer & Pavelin, 2008; Haddock-Fraser & Fraser, 2008; Clarkson et al., 2008). Wilmshurst and Frost (2000) assumed, for example, that petrochemicals companies will usually be more environmentally sensitive than brewers, and thus, if legitimacy based explanation is in evidence, petrochemical companies will make higher environmental disclosures than companies in less environmentally sensitive sectors.

In this context, the purpose of this study is to extend organizational legitimacy arguments by analyzing the extent and content of environmental disclosures across sectors according to their environmental impact. Based on the prior literature (Clarke & Gibson-Sweet, 1999; Campbell, 2003; Holland & Boon Foo, 2003; De Villiers & Van Staden, 2006) the following dimensions of environmental disclosure were systematically analyzed and compared in this study: (1) presence of environmental disclosure; (2) presentation of environmental disclosure; (3) location of environmental disclosure; (4) environmental disclosure items. The main research question of this study is whether these environmental disclosure dimensions would vary across industry sectors. For the purposes of the present study, the industrial sectors were sorted into three groups according to environmental impact of company's operation (Note 1): high impact sectors such as chemicals and pharmaceuticals, forestry and paper, mining and metals; medium impact sectors such as electronic and electrical equipment, hotels, catering and facilities management, public transport; low impact sectors such as information technology, support services, telecoms etc. In the legitimacy theory context, business in high impact industry sectors would be expected to give more attention and importance to environmental disclosures than business in low impact industry sectors. Because of their activities involving the potential for environmental malpractice or pollution, high impact industry sectors faced more risk of being criticized on environmental issues.

This paper intends to contribute to the existing literature in the following ways: First of all it brings a developing country study to the environmental disclosure and reporting literature and therefore complements the current focus, which is mainly on developed countries such as the USA (Patten, 1991; Gamble et al., 1995; Lober et al., 1997; Cho et al., 2010), the UK (Harte & Owen, 1991; Gray et al., 1995; Campbell, 2004), Canada (Bewley & Li, 2000; Buhr & Freedman, 2001; Magness, 2006), Australia and New Zealand (Deegan & Gordon, 1996; Hackston & Milne, 1996; Rao et al., 2012), the European Union (Niskala & Pretes, 1995; Stittle et al., 1997; Moneva & Llena, 2000; Cormier & Magnan, 2003; Hibbitt & Collison, 2004; Cormier et al., 2005; Reverte, 2009; Tagesson et al., 2009; Da Silva Monterio & Aibar-Guzman, 2010). According to Earnhart et al. (2014) the benefits of a corporate environmental strategy are less clear in developing countries because of poorly enforced environmental regulations and weak social pressures. Thus it is important for business managers, policymakers, and environmental activists to understand the causes and consequences of corporate environmental strategy in these countries so that they are able to implement effective strategies, develop useful policies, and promote meaningful activities, respectively. In the case of Turkey, a developing country little is known about neither the corporate environmental management and disclosure practices nor the motives behind environmental disclosures. In line with this concern this study contributes to the understanding of corporate environmental management and disclosure practices in the context of a developing country. Furthermore most studies which sought to link legitimacy theory to corporate environmental disclosure have tended to focus on particular firms (Deegan et al., 2002; Rahaman et al., 2004; Laine, 2009; Tilling & Tilt, 2010) or particular industries such as mining, metal, oil and gas, paper, chemicals (Patten, 1992; Milne & Patten, 2002; De Villers & Van Staden, 2006; Jenkins & Yakovleva, 2006; Cho & Patten, 2007; Pellegrino & Lodhia, 2012). Unlike many studies that have a limited sample size or are industry specific, this study have a relatively large sample from a wide range of industry sectors. Thus this paper provides a comprehensive comparison of corporate environmental disclosure across industry sectors. Finally it contributes to the literature on legitimacy theory. Specifically, predictions of legitimacy theory were expounded by examining legitimacy as a motive for environmental disclosure.

The remainder of this paper is organized as follows: The next section provides background information and a literature review on legitimacy theory, environmental disclosures and industry variations. The research design, including sample selection, data collection and database analysis, is described in the third section. In the subsequent section, analysis of the data and relevant findings were presented. The final section summarizes the main conclusions of the study, with a discussion of its limitations and implications for future research.

2. Theoretical Perspectives

2.1 Legitimacy Theory as an Explanatory Theory of Environmental Disclosure

Organizational legitimacy has long been acknowledged as crucial for the survival of any organization (e.g., Dowling & Pfeffer, 1975; Meyer & Rowan, 1977; DiMaggio & Powell, 1983; Suchman, 1995). Suchman (1995, p. 274) defined legitimacy as "a generalized perception or assumption that the actions of an entity are desirable, proper or appropriate within some socially constructed system of norms, values, beliefs and definitions". The notion of a 'social contract' between an organization and the society in which it operates underpins legitimacy theory. The social contract is defined as the "multitude of implicit and explicit expectations that society has about how an organization should conduct its operations" (Deegan, 2007, p. 123). The risk of losing legitimacy would surface for organizations which are perceived by institutional actors to be acting in ways that are inconsistent with the values emphasized in the contract. Organizations lacking legitimacy are deemed as less respectable and trustable, and thus are less likely to assured the resources for survival while organizations that gain and maintain legitimacy are viewed as trustworthy and deserving of approval.

There are two streams of literature on organizational legitimacy – strategic and institutional (Suchman, 1995). According to strategic approach (e.g., Dowling & Pfeffer, 1975; Pfeffer, 1981; Ashforth & Gibbs, 1990) legitimation is purposive, calculated, and frequently oppositional. This approach contends that organizations are able to make strategic choices to alter their legitimacy status and to cultivate the resources through corporate actions, by adapting their activities and changing perceptions (Aerts & Cormier, 2009). As such, one of the strategies organizations can undertake to gain, repair or maintain legitimacy is to use communication to project an image of social legitimacy (Dowling & Pfeffer, 1975). Therefore communication plays a crucial role in the legitimation process and this association potentially explains why strategic approach of legitimacy theory has been widely analyzed, tested and validated in the environmental disclosure literature. Gray et al. (1996) argue that information is a major element that can be employed by the organization to manage (or manipulate) the stakeholder in order to gain their support and approval, or to distract their opposition and disapproval. Thus environmental disclosure is an effective way in which companies can try to convince institutional actors that their existence and their operations are legitimate. If corporate disclosures can persuade institutional actors that the firm's operations are legitimate in that firm does not pose unacceptable environmental risks and operating as an environmentally responsible citizen, the risk to legitimacy will be reduced (Hrasky, 2012). In contrast to this strategic tradition, institutional researchers (Meyer & Scott, 1983; DiMaggio & Powell, 1983; Zucker, 1987; Meyer & Rowan, 1991) depict legitimacy not as an operational resource, but as a set of constitutive beliefs. Organizations do not simply extract legitimacy from the environment in a feat of cultural strip mining; rather, external institutions construct and interpenetrate the organization in every respect. Within this tradition, legitimacy and institutionalization are virtually synonymous (Suchman, 1995).

Suchman (1995) articulates three broad types of legitimacy that an organization might seek: (1) pragmatic legitimacy, based on audience self-interest; (2) moral, based on normative approval and (3) cognitive, based on comprehensibility and taken-for-grantedness. Of these, pragmatic and moral legitimacy involve and rely on discursive interaction with the organization's audience (Suchman, 1995), and are thus the most pertinent to explore in the context of corporate environmental disclosure strategies (Mobus, 2005; Mahadeo et al., 2011; Hrasky, 2012). Pragmatic legitimacy rests on the self-interested calculations of an organization's most immediate audiences. Often, this immediacy involves direct exchanges between organization and audience; however, it also can involve broader political, economic, or social interdependencies, in which organizational action nonetheless visibly affects the audience's well-being (Suchman, 1995). In other words audiences will ascribe legitimacy to the organization as long as they perceive that they will directly or indirectly benefit from its activities. For this reason, environmental disclosure as a means to pursue pragmatic legitimacy will underline the benefits of being committed to environmental management such as reduced pollution, fewer greenhouse gas emissions, resource conservation, less waste etc. On the other hand Suchman (1995) suggest that audiences often react as though organizations were individuals-possessed of goals, tastes, styles, and personalities. Thus, constituents are likely to accord dispositional legitimacy (one particular variant of pragmatic legitimacy) to those organizations that "have our best interests at heart," that "share our values," or that are "honest," "trustworthy," "decent," and "wise." A widespread belief in an organization's good character may dampen the delegitimizing effects of isolated failures, miscues, and reversals (Suchman, 1995). Hence organizations pursuing dispositional legitimacy may use environmental disclosures as a strategy to portray an image of being environmentally responsible citizen. According to Suchman (1995) moral legitimacy rests not on judgments about whether a given activity benefits the evaluator, but rather on judgments about whether the activity is "the right thing to do." These judgments, in turn, usually reflect beliefs about whether the activity effectively promotes societal welfare, as defined by the audience's socially constructed value system. In general, moral legitimacy takes one of three forms: evaluations of outputs and consequences, evaluations of techniques and procedures, and evaluations of categories and structures (Suchman, 1995). An organization gained moral legitimacy when its audiences make a favorable evaluation of its consequences, procedures and structures. Hence, environmental disclosure, which provides information, demonstrated that organizations' consequences and outputs, techniques and procedures, and structural characteristics are morally acceptable, could be seen as means to enhance moral legitimacy. Environmental disclosures could be utilized by audiences to assess an organization's claim to moral legitimacy.

Several researchers have discussed corporate environmental and social disclosure practices within the theoretical framework of legitimacy theory and many of who to test legitimacy and find support, or limited support (Patten, 1992; Deegan & Gordon, 1996; Deegan & Rankin, 1996; Walden & Schwartz, 1997; Brown & Deegan, 1998; Deegan et al., 2000; Deegan et al., 2002; Magness, 2006). The theoretical structure of these studies rely extensively on the legitimacy theory framework provided by Lindblom (1994) to explain the motivations for companies to voluntarily disclose environmental information. According to Lindblom (1994), organizations may employ four corporate disclosure strategies, either individually or in combination, in order to gain, maintain or enhance their perceived legitimacy. The first is concerned with informing the society about any real internal changes in the organization's operations, methods, goals and performance to minimize the legitimacy gap caused by the failure of performance on the part of the organization. Second, disclosures may endeavor to alter society's perceptions, without changing actual corporate behavior or society's expectations. Third, attempting to alter society's external expectations about its performance, where the corporation is not making internal changes to minimize the legitimacy gap. Finally, disclosures may be directed towards endeavoring to manipulate society's perceptions, rather than educating society, by redirecting attention from the central issue towards another associated issue, through for example, emotive symbols (Lindblom, 1994).

Guthrie and Parker (1989) found that apart from social disclosures relating to the environment, other forms of social disclosure could not be explained by legitimacy theory. Patten (1992) indicated firms related to that industry and/or incident significantly increased the amount of environmental disclosure in their annual reports immediately after the spill, consistent with a legitimation perspective. Deegan and Gordon (1996) found an association between the quantity of environmental disclosure and environmental lobby group membership and argued that the levels of corporate environmental disclosures are associated with the legitimation process, whereby companies seek to attain the status of legitimacy. Wilmshurst and Frost (2000) conducted a questionnaire survey among a sample of chief financial officers which asked the executives to rank the importance of various factors in environmental disclosure decisions. Wilmshurst and Frost (2000) stated that results of the analysis provide limited support for legitimacy theory as an explanatory link between identified influential factors in management's decision process and actual environmental disclosure. O'Donovan (2002) argued that legitimacy is clearly important to corporate management in managing the level of conflict between organizations and their relevant publics. Moreover he suggested that micro-legitimation tactics being used in response to legitimacy threatening environmental issues/events, and dependent on whether the purpose of the response is designed to gain, maintain or repair legitimacy. Milne and Patten (2002) report evidence of the legitimating impact of disclosure in those positive environmental disclosures were found to mitigate the impacts of negative environmental information. De Villiers and Van Staden (2006) conclude that legitimizing objectives may be served by changing the type (general/specific) or reducing the volume of environmental disclosures. Laine (2009) argued that the case company (a leading Finnish chemical company) has adjusted its disclosures to respond to the varying institutional pressures in order to maintain a legitimate position in society. Tilling and Tilt (2010) suggest that the voluntary social disclosures made in the annual reports of Rothmans may have been provided with a view to counteracting the potentially negative consequences to the firm's legitimacy of the smoking and health debate, supporting the traditional view that firms engage in legitimizing strategies, including increased disclosure, when faced with a threat. Finally Kuo and Chen (2013) indicate that firms from environmentally-sensitive industries can significantly improve their environmental legitimacy by releasing CSR reports, and firms with higher prior environmental legitimacy will be more active in environmental disclosure and also establish better environmental legitimacy in the next period.

2.2 Organizational Legitimacy, Industry Variations and Environmental Disclosure

Organizational legitimacy is seen to achieve congruence between society's expectations and perceptions for organizations' activities with organizations' actions and activities. Therefore there will be a legitimacy gap when there are perceptions of misalignment between business performance and societal expectations (Sethi, 1977). Regarding the reasons for legitimacy gaps Sethi (1977) argued that there are two major sources: certain business actions and the changing sociopolitical environment or societal expectations. As an example of legitimacy gap caused by changing societal expectations Nasi et al. (1997) state: For American tobacco companies in the 1970s, for example, the increasing awareness of health consequences of smoking resulted in a significant and widening legitimacy gap (Miles & Cameron, 1982). The tobacco companies had not changed their activities, and their image was much the same as it had been, yet they suddenly faced a significantly different evaluation of their role in society; they faced a significant and widening legitimacy gap. Similarly the heightened awareness of environmental issues -such as climate change, ozone depletion, air and water pollution, deforestation, resource depletion- resulted in significant legitimacy gap for corporations in industries whose manufacturing processes negatively influence environment. Firms within these industries are at risk of breaching the social contract due to their activities that pose unacceptable environmental risks or damage the environment. Therefore these corporations have been under continuous public scrutiny to conduct their operations in a more environmentally sustainable manner and consider the effect of their activities on various stakeholders.

The levels of environmental impacts can vary greatly from industry to industry. For example, the oil, chemical and paper industries are associated with the greatest amount of environmental damage and risk because they release great volumes of pollutants during production process, their products have a significant impact on the natural environment and many recent ecological disasters are the consequence of accidents in these industries. At the other extreme, service industries represent minimal environmental impact and risk. Hence each industrial sector is subject to different scrutiny and pressure from institutional actors (Gonzalez-Benito & Gonzales-Benito, 2010). A range of differences also exists across industries in relation to corporate requirements, the needs of stakeholders and government regulations. For example companies belonging to industries have a high impact on environment will face more strict government regulation as these firms are the ones more likely to damage the environment through the use hazardous substances and/or discharge hazardous wastes and effluents. In other words societal pressures vary depending on the degree of environmental impact caused by activities of business within the industry. Thus, it seems reasonable that as a response to these pressures, the extent and content of environmental disclosures differ from sector to sector.

Cross-sectoral variability in environmental disclosure has been observed by several previous studies. The results from these studies indicate that corporations in damaging or environmentally sensitive industries disclose and report considerably more information than corporations in other industries do (Dierkes & Preston, 1977; Cowen et al., 1987; Patten, 1991; Roberts, 1992; Niskala & Pretes, 1995; Gamble et al., 1995; Hackston & Milne, 1996; Deegan & Gordon, 1996; Kolk et al., 2001; Campbell, 2003; Cho & Patten, 2007). In general, corporations within the finance and service industries disclose very little information on social and environmental issues, while mining companies, oil companies and chemical companies have a leading position regarding such disclosing (Tagesson et al., 2009). Dierkes and Preston (1977) found that companies whose economic activities modify the environment are scrutinized more with regard to their environmental performance than companies operating in other industries. They contend that these companies are more likely to disclose information about their environmental impacts (Cowen et al., 1987). Roberts (1992) tested for industry effects by classifying industries into two groups – high profile industries or low profile industries. A positive relationship was found between industry type and level of disclosure and Roberts (1992) concluded that corporations with a high profile are more likely to disclose social responsibility activities. Niskala and Pretes (1995) found that the companies in the industries that have the most direct environmental influence such as energy production, forestry and forest products, oil trading corporations tend to report more environmental information in their annual reports in comparison with other industries. Gamble et al. (1995) found that the quality of environmental disclosures of certain segments of the industry, i.e., petroleum refining, hazardous waste management and steel works and blast furnaces was better than that of the disclosures made by firms in other industries in the sample. Hackston and Milne (1996) found that high-profile industry companies disclose significantly more social and environmental information than low-profile industry companies. Campbell (2003) concluded that companies that are more environmentally, over a period of time, disclose more environmental information in their corporate reports than companies that are less environmentally sensitive. Cho and Patten (2007) found that firms in environmentally sensitive industries were especially likely to respond to pressures for transparency by disclosing some forms of environmental information in their annual reports. However, some other studies showed (Kirkman & Hope, 1992; Craven & Marston, 1999; Sahay, 2004) different results that there is no significant association between industry membership and the extent of environmental information disclosure.

In general the results from these studies show that industries differ with regard to the extent and content of environmental information they disclose. More specifically corporations in industries with higher potential for or actual impact on the natural environment face greater exposure to social and political pressures and they have an incentive to use disclosure to address these exposures. Because environmental disclosures indicate that business has achieve congruence between society's expectations and perceptions with its actions and activities and minimize or eliminate a legitimacy gap.

3. Research Design

3.1 Sample Selection

The population of this study consisted of companies quoted on Istanbul Stock Exchange. Firms that are quoted on the stock market are usually subjected to a set of standards and requirements established by the securities authorities, which are related to both type and quality of the information that companies have to make available to their stakeholders. The initial sample included all companies listed on Istanbul Stock Exchange (Borsa Istanbul) at 31 December 2013. But the annual reports which are not available in time for the analysis and do not meet minimum reporting requirements were excluded from the review. From the initial 356 listed companies, a final sample of 223 companies was identified, as described in Table 1.

In many previous studies, companies were classified according to various criteria. Commonly companies are separated into two types: high or low profile companies (Roberts, 1992; Hackston & Milne, 1996). According to Roberts (1992), industrial sectors defined as "high profile" are these well-known to have consumer visibility, a high level of political risk or concentrated intense competition such as agriculture, forest and paper, automobile, airlines, mining, metal, oil, utilities, chemicals. On the other hand consumer goods, construction and property, service, food, retail, and other industries are classified as low profile industries. Furthermore some studies (Deegan & Gordon, 1996; Wilmshurst & Frost, 2000; Campbell, 2003; Cho & Patten, 2007) have grouped companies according to environmental sensitivity such as environmentally sensitive industries and non-environmentally industries or more environmentally sensitive industries and less environmentally sensitive industries. More environmentally sensitive industries were those with more risk of being criticized on environmental issues because of their activities involving the potential for environmental malpractice, natural resource extraction or pollution such as oil exploration, chemical and allied products, petroleum refining, metals, mining, utilities. Less environmentally sensitive sectors were those with little or less apparent risk of being criticized for environmental 'sin' (Campbell, 2003; Cho & Patten, 2007). In order to provide a much more precise comparison, the companies included in the sample are classified according to FTSE4Good Indexes Sector Classification (Note 2): high impact sectors, medium impact sectors and low impact sectors.

Table 1 presents information about the sampled companies and their distribution within industry sectors in regard to their environmental impact. Among the 223 selected companies, 109 (48.8%) representing companies within high impact sectors, 78 (34.9%) representing companies within medium impact sectors and 36 (16.1%) representing companies within low impact sectors.

Table 1. Distribution of sample companies used in the study

Group of Industry Sector	Sample Size N	Percentage %
High Impact Sectors	**109**	**48,8**
Building Materials	18	8,07
Chemicals and Pharmaceuticals	19	8,52
Food, Beverages and Tobacco	27	12,11
Forestry and Paper	10	4,48
Mining and Metals	19	8,52
Oil and Gas	3	1,35
Road Distribution and Shipping	6	2,69
Vehicle Manufacture	7	3,14

Medium Impact Sectors	**78**	**34,9**
Electronic and Electrical Equipment	9	4,04
Financials not elsewhere classified	13	5,83
Hotels, Catering and Facilities Management	10	4,48
Manufacturers not elsewhere classified	32	14,35
Printing and Newspaper Publishing	6	2,69
Retailers not elsewhere classified	8	3,59
Low Impact Sectors	**36**	**16,1**
Information Technology	13	5,83
Property Investors	14	6,28
Leisure not elsewhere classified	5	2,24
Support Services	2	0,90
Telecoms	2	0,90
Total	223	100

3.2 Data Collection

In order to carry out a cross-sectoral analysis of environmental disclosures, data were collected from annual reports of the selected sample companies for the year 2013. Numerous studies have pointed out the role of annual reports as a major channel for corporate communication (Wiseman, 1982; Patten, 1991; Gamble et al., 1995; Gray et al., 1995; Deegan & Gordon, 1996; Brown & Deegan, 1998; Moneva & Llena, 2000; Wilmshurst & Frost, 2000; Tilt, 2001; Deegan et al., 2002; O'Donovan, 2002; Holland & Boon Foo, 2003; Cho & Patten, 2007; Da Silva Monterio & Aibar-Guzman, 2010).

The annual report is the most publicized and visible document produced by publicly owned companies. It is the principal means by which corporations communicate explanations of past performance, expectations of future results, and any other information the company feels it is important to convey to the public. Although the corporate annual reports are designed primarily to report to investors on past financial activities, they are one of the major sources of information used by a wide range of users. They may be read by employees, the press and pressure groups such as environmentalist (Halme & Huse, 1997). By environmental disclosing in annual report, a company enhances its visibility and sends specific signals and messages indicate that the company is aware of environmental issues.

3.3 Database Analysis

In line with a number of studies on social and environmental disclosures (Wiseman, 1982; Guthrie & Mathews, 1985; Guthrie & Parker, 1989, 1990; Zeghal & Ahmed, 1990; Gray et al., 1995; 1990; Hackston & Milne, 1996; Buhr, 1998; Wilmshurst & Frost, 2000; Nieminen & Niskanen, 2001; Maignan & Ralston, 2002; Cormier & Magnan, 2003; Al-Tuwaijri et al., 2004; Aerts & Cormier, 2009) the environmental disclosures in annual reports were analyzed using content analysis. Content analysis was the primary tool used for analyzing the published information. It has been defined as a method that can transform text descriptions into quantitative data (Berelson, 1952) in a systematic and objective manner.

The content analysis method that used in this research is conceptual analysis based on detecting the presence or absence of information covering a number of different subject areas (Guthrie & Mathews, 1985). Using this technique, researchers first identify certain environmental issues, then analyze the environmental disclosure of each issue using a yes/no (or 1, 0) scoring methodology. In this context fifteen content categories within four testable dimensions of environmental disclosure were developed for coding. These categories are described as follows: (1) Presence of environmental disclosure: companies with disclosure and companies without disclosure; (2) Presentation of environmental disclosure: separate environmental section in annual report and stand-alone environmental report; (3) Location of environmental disclosure: chairman's or director's letter, review of operations, ethical rules and social responsibility, sustainability/environment, investments and others; (4) Environmental disclosure items (Note3): goals and performance; environmental policy; organizational responsibility; training and awareness; monitoring and follow-up; additional contextual information.

4. Presentation and Discussion of Results

4.1 Presence of Environmental Disclosure

The findings of this study are partly inconsistent with legitimacy theory and previous studies that have generally found that corporations in damaging or environmentally sensitive industries disclose and report considerably more information than corporations in other industries do (Cowen et al., 1987; Patten, 1991; Hackston & Milne, 1996; Deegan, 1996; Deegan & Gordon, 1996; Kolk et al., 2001). In the legitimacy context it was expected that companies operating in high environmental impact sectors will be more likely to disclosure environmental information than companies in medium and low impact sectors. But surprisingly it is found that companies in medium environmental impact sectors are more inclined to disclose environmental information than companies in high impact sectors. As can be seen from Table 2, 56.41% of companies in medium impact sector disclosed environmental information compared to 51.38% in the high impact sector. On the other hand, not surprisingly, percentage of companies with environmental disclosures is lower compared to other sectors.

Table 2. Percentage of companies disclosing environmental information in their annual report

Group of Sector	Sample Size (N)	Companies with Disclosure	Percentage (%)
High Impact Sector	109	56	51,38
Medium Impact Sector	78	44	56,41
Low Impact Sector	36	14	38,89
Total	223	112	50,22

In Figure 1 each industry examined individually with regard to percentages of companies disclosing environmental information. The highest percentage of companies with environmental disclosure was found in the Oil and Gas industry (100%), followed by Electronic and Electrical Equipment industry (87.5%), Building Materials industry (72.22%), Vehicle Manufacture industry (71.43%) and Financials not elsewhere classified (69.23%) while Leisure not elsewhere classified and Support Services industries (0%) have lowest average followed by Chemicals and Pharmaceuticals (26.32%), Hotels, Catering and Facilities Management (30%) and Retailers not elsewhere classified (37.5%). It is noticeable that, although they have high impact on the environment, Mining and Metals (42.11%), Forestry and Paper (40%) and Chemicals and Pharmaceuticals industries (26.32%) are behind industries with low environmental impact like Property Investors (50%), Telecoms (50%) and Information Technology industries (46.15). This finding does not appear to support a legitimacy theory based understanding with regard to environmental disclosure. Because in the legitimacy theory context, companies operating in high impact industries like mining and metals, forestry and paper, chemicals and pharmaceuticals would be expected to give more attention and importance to environmental disclosures than companies in industries with low environmental impact. Because of their activities involving the potential for environmental malpractice or pollution, high impact industries faced more risk of being criticized on environmental matters.

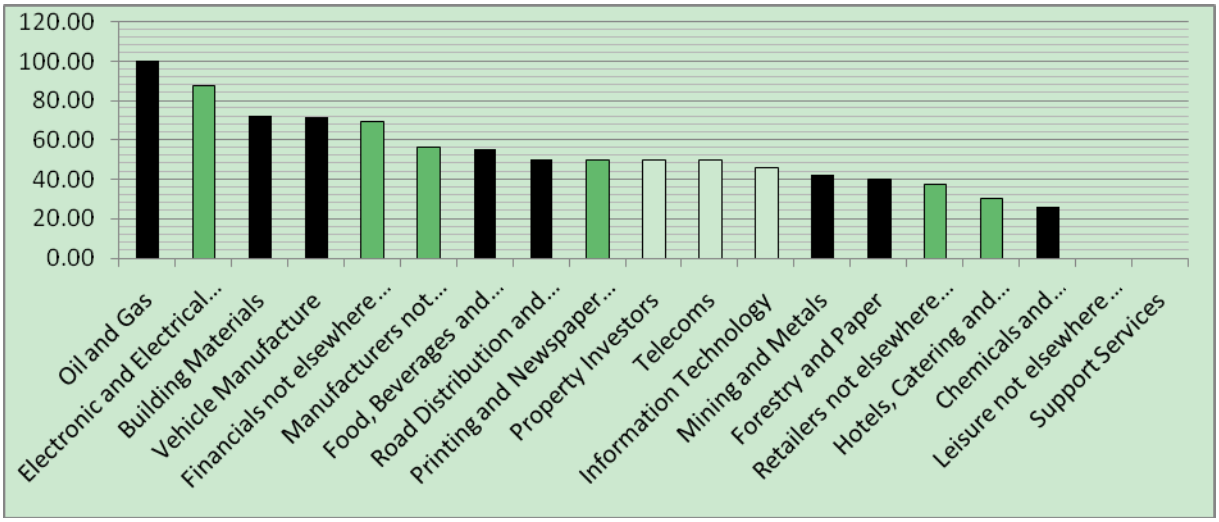

Figure 1. Percentage of companies disclosing environmental information and industry variations

Note. Shading differences indicate high environmental impact [black], medium environmental impact [grey] and low enviromental impact industries [white].

4.2 Presentation of Environmental Disclosure

Traditionally the annual report was the major medium for communicating social and environmental information to the public (Brown & Deegan, 1998; Neu et al., 1998; Cormier & Gordon, 2001). Over time sustainability and environmental reporting practices have embraced alternative communication media (Pellegrino & Lodhia, 2012). In general, percentage of companies that produce stand-alone environmental report in Turkey (3.13% of companies in the sample and 6.25% of companies with environmental disclosure) is relatively low compared to developed countries. For example Holland and Boon Foo (2003) found that 53% of UK companies and 39% of US companies produced stand-alone reports. Similarly, only 6.72% of companies in the sample and 13.39% of companies with environmental disclosure provide a separate environmental section in the annual reports while 58% of UK companies and 28% of US companies have done so.

Table 3. Stand-alone reports and separate environmental sections in annual reports

	High Impact Industries		Medium Impact Industries		Low Impact Industries	
	No	%	No	%	No	%
Companies produced stand-alone environmental report	3	5,35	4	9,09	0	0
Companies with separate environmental section in annual report	8	14,28	7	15,90	1	7,14
Companies produced stand-alone environmental report and also included separate environmental section in annual report	1	1,78	3	6,81	0	0

Kirkman and Hope (1992) suggested that a separate report or a separate environmental section in annual report indicate the importance attached to the environmental issues. Similarly Clarke and Gibson-Sweet (1999) argued that separate reports on aspects of social performance represent a significant investment in time and money and these will only be produced by those companies which consider it very important to inform stakeholders about their performance. They found that companies in sectors with a high environmental impact lend to produce a high proportion of these reports. In this context this study focused on legitimacy theory as an explanatory factor in the preparation of stand-alone social and environmental reports by companies. Hence it was expected that companies subject to greater public exposure because of their environmental impact will be more likely to provide a stand-alone environmental report and separate environmental section in their annual reports. As can be seen from Table 3; 5.35% of companies in high impact sectors produced stand-alone reports compared to 9,09% in the medium impact sectors. In terms of providing a separate environmental section in the annual reports, percentage of companies have done so in medium impact sectors is little more than companies in high impact sectors. From Table 2 the results show that, even though they are subject to greater pressures with respect to environmental concerns companies in high impact sectors have a relatively lower percentage of occurrences than the medium impact sectors. This result also failed to confirm legitimacy theory as an explanatory factor in the preparation of stand-alone social and environmental reports by companies.

4.3 Location of Environmental Disclosure

Table 4 shows the number of sections in which companies are disclosing environmental information in their Annual Report. As shown in Table 4 most of companies in the sample disclosed environmental information in only one section. Like a separate report or a separate environmental section, the number of sections in which companies are disclosing environmental information also indicates the importance attached to the environmental issues. The highest percentage of companies is disclosing environmental information in two or more section was found in the medium impact sector (27.28%), followed by the high impact sectors (23.22%) and low impact sectors (7.14%).

Table 4. Number of sections in which companies were disclosing environmental information

	High Impact Industries		Medium Impact Industries		Low Impact Industries	
	No	%	No	%	No	%
1 Section	43	76,79	32	72,73	13	92,85
2 Section	12	21,43	7	15,91	1	7,14
3 Section	1	1,79	3	6,82	0	0,00
4 Section	0	0,00	2	4,55	0	0,00

In order to examine how companies have responded to the pressures for environmental information by institutional actors, the location of environmental disclosure within the Annual Report is highlighted in Table 5, which shows the percentage of companies disclosing environmental information in each of the sections identified within the Annual Report. It can be seen that the primary location for environmental information is the ethical rules and social responsibility section. On the other hand Table 5 shows that there is a difference across sectors in selecting the location to disclose environmental information. The percentage of companies in medium impact sectors that disclose environmental information in Review of Company or Operations (18.18%), Research/Development (11.36%) and Director’s or Manager's Letter (11.36%) sections is relatively high compared to other sectors. Review of Company or Operations is often the first section contained within an Annual Report and where many stakeholders look for an initial overview of the company and its operations. In Review of Operations and Research/Development sections the majority of disclosures relate to environmental products and processes. When take into account companies' high proximity to final consumer in medium impact sectors, it seems reasonable for these companies to select these sections to disclose environmental information. On the other hand environmental disclosures in Director’s or Manager's Letter sections are important in terms of indicating the commitment of company to environmental responsibilities. Environmental information could be considered equally alongside other strategic issues to be disclosed in this section. Another notable result is that 12.50% of companies in high impact sectors disclose environmental information in Investments section whereas none of companies in medium and low impact industries selected this section. The companies operating in high impact sectors make mention of their investments which generally seek to mitigate or reduce their negative environmental impact in this section.

Table 5. Percentage of companies disclosing environmental information in different locations within the annual report

	High Impact Industries		Medium Impact Industries		Low Impact Industries	
	No	%	No	%	No	%
Ethical Rules and Social Responsibility	37	66,07	32	72,73	13	92,86
Research/Development	3	5,36	5	11,36	0	0,00
Review of Company or Operations	6	10,71	8	18,18	0	0,00
Director’s or Manager's Letter	2	3,57	5	11,36	1	7,14
Investments	7	12,50	0	0,00	0	0,00
Sustainability/Environment	8	14,29	7	15,91	1	7,14
Other	6	10,71	2	4,55	0	0,00

4.4 Environmental Disclosure Items

Finally, this study examined whether companies in high, medium and low impact sectors placed different emphasis on environmental items disclosed in the annual report. Table 6 provided the percentage of companies that disclosed each environmental item. In general most frequently environmental items by Turkish companies were Emissions, Effluents, and Waste (50.89% of companies with disclosure), Compliance (44.64%) and Monitoring and Follow-Up items (42.85). In their annual reports, companies particularly emphasize their compliance with environmental laws and standards. On the other hands percentage of companies disclosed their environmental goals (6.25%) and policy (19.64%) was quite low. These items are important in terms of indicating the companies' overall commitment related to the environmental concerns. Although the corporate approach to environmental protection has been evolving from a regulation-driven reactive mode to a more proactive approach involving an internally motivated organizational change in corporate culture and management practices towards environmental self-regulation (Khanna & Speir, 2007), Turkish companies are still more reactive to environmental regulatory pressures.

Table 6. Number and percentage of companies that disclose each environmental item

	High Impact Industries		Medium Impact Industries		Low Impact Industries	
	No	%	No	%	No	%
Goals	4	7,14	3	6,82	0	0,00
Performance						
Materials	11	19,64	3	6,82	0	0,00
Energy	12	21,43	13	29,55	3	21,42
Water	9	16,07	9	20,45	0	0,00
Biodiversity	2	3,57	0	0,00	0	0,00
Emissions, Effluents, and Waste	32	57,14	19	43,18	6	42,85
Products and Services	11	19,64	17	38,64	1	7,14
Compliance	25	44,64	20	45,45	5	35,71
Transport	0	0,00	2	4,55	0	0,00
Policy	12	21,43	9	20,45	1	7,14
Organizational responsibility	14	25,00	5	11,36	0	0,00
Training and awareness	15	26,79	9	20,45	2	14,28
Monitoring and Follow-Up	26	46,43	18	40,91	4	28,57
Additional Contextual Information						
Key successes and awards	12	21,43	12	27,27	2	14,28
Discretionary activities	7	12,50	2	4,55	1	7,14

The items which appear most different across sectors are highlighted and are discussed below. Percentage of companies mentioned Materials (19.64%), Emissions, Effluents, and Waste (57.14%) and Organizational Responsibility (25.00%) in high impact sectors is higher than companies in medium and low impact sectors. The environmental problems and hazards associated with materials and practices used by companies operating high impact sectors are well known. These companies damage the environment through the use hazardous and toxic materials and/or discharge harmful wastes and effluents. Therefore companies in high impact sectors faced more stringent pressures. As a response to these pressures companies in high impact sectors underline that they achieve and maintain compliance with their environmental permits and any other legal requirements to protect the environment. In other respects there is another noticeable difference in Products and Services item across sectors. 38.64% of companies in medium impact sectors have disclosed information on environmental products and services whereas only 19.64% of companies in high impact sectors and 7.14% of companies in low impact sectors have done so. Most of companies in medium impact sectors provide their products and services to the end consumer market and have a direct relationship to the end consumer. This may explain the high percentage of companies in medium impact sectors disclosing such information.

5. Conclusions

This study investigated whether legitimacy theory is an appropriate framework to explain the differences in environmental disclosure practices across sectors. The results of this study fail to confirm legitimacy theory as an explicator of environmental disclosure in the Turkey case. According to the legitimacy theory, companies in high environmental impact sectors are expected to be more likely to disclose environmental information and to provide a stand-alone environmental report and separate environmental section in their annual reports in order to persuade institutional pressure groups that the company's operations are legitimate in that it is operating as an environmentally responsible citizen. However, companies operating in medium impact sectors have a higher tendency to disclose environmental information and to provide a stand-alone environmental report and separate environmental section in their annual reports than companies in high and low impact sectors in Turkey. These findings are not consistent with previous studies that have generally found that corporations in damaging or environmentally sensitive industries disclose and report considerably more information than corporations in other industries do (Cowen et al., 1987; Patten, 1991; Hackston & Milne, 1996; Deegan, 1996; Deegan & Gordon, 1996; Kolk et al., 2001). But it should be taken into consideration that most of these environmental disclosure studies have focused on developed countries. This may explain why the main findings of this study are not consistent with previous studies. Because developing economies -like Turkey- are largely considered to have weak formal institutional constraints compared to developed economies with strong institutional structures (Meyer et al., 2009). Environmental regulation in developing countries generally is inadequate due to lack of funds, trained personnel, public infrastructure and, in some cases, political will. Even in countries where policies are in place, compliance is low due to lack of enforcement (Fikru, 2014). Moreover, regulatory agencies in developing economies are subject to strong influence by industry lobbies, and corruption is more widespread in developing economies than in developed countries. Furthermore civil society pressure is weak in developing economies due in part to concerns that environmental actions against firms could have negative economic and employment implications that create disincentives for community action against polluting firms. The potential for NGO and citizen protests to improve environmental performance is also limited because of inadequate regulatory capacity to take the enforcement actions that communities seek (Earnhart, 2014). These common characteristics of developing countries may explain the results for environmental disclosures by companies in high environmental impact sectors, such as mining and metals, forestry and paper, chemicals and pharmaceuticals. Although they operating in the most polluting and dangerous industrial sectors, these companies disclose less environmental information compared to some companies in medium and low impact sectors.

On the other hand as Clarke and Gibson-Sweet (1999) suggest, some industries have a larger potential impact on the environment but they tend to have a much lesser degree of proximity to the final consumer and to generate a lower level of public awareness. The fact that most of companies in high impact sectors are not as close to the final consumer and are thus less visible, may also explain the differences exist in disclosure practices across sectors, at least in part. From a consumer visibility perspective, companies producing goods which are widely consumed tend to generate more social visibility (Branco & Rodrigues, 2008). Most of companies in medium impact sectors such as electronic and electrical equipment, banking, printing and newspaper publishing provide their products and services to the end consumer market and have a direct relationship to the end consumer. Results show that companies with a higher visibility among consumers seem to exhibit greater concern to improve the corporate image and attract the green consumer through environmental information disclosure in annual reports. The public concern about environment and the emergence of green consumerism will also put pressure on those companies operating in sectors with a high public profile. Therefore companies in medium impact sectors have different environmental disclosure practices than companies in high impact sectors with little visibility among consumers and general public such as mining and metals, forestry and paper, chemicals and pharmaceuticals.

Finally, this paper is subject to a number of limitations. In interpreting the results and conclusions, these limitations should be taken into account: (1) Obviously the methodology used in this paper only provides a very limited insight into environmental disclosure practices. The content analysis that measures and describes environmental disclosures in annual reports is a purely descriptive method which detecting the presence or absence of information covering a number of different subject areas, but does not expose the underlying motives for the observed pattern; (2) The data analyzed in this study were collected only from annual reports. Although the annual report has long been considered to be a major public document, some companies not only use their annual reports to disclose information, but also offer environmental information in other sources as well such as corporate web sites or stand-alone environmental reports. (3) The cross-sectional analysis examined only one year's environmental disclosures, and so may not be generalisable across other periods. Future research may address some of these limitations by, for example, providing more comprehensive research in which analyzed the environmental disclosures in other sources. On the other hand a longitudinal approach with a more fine-grained measuring instrument for environmental information might improve the explanatory power of future studies. Finally further research needs to extend to the scope of this study to a wider sample of companies across countries and provide a comparative analysis between developed and developing countries.

References

Aerts, W., & Cormier, D. (2009). Media legitimacy and corporate environmental communication. *Accounting, Organizations and Society*, *34*(1), 1-27. http://dx.doi.org/10.1016/j.aos.2008.02.005

Ahmad, Z., Hassan, S., & Mohammad, J. (2003). Determinants of environmental reporting in Malaysia. *International Journal of Business Studies*, *11*(1), 69-90.

Al-Tuwaijri, S. A., Christensen, T. E., & Hughes, K. E. (n.d.). The Relations among Environmental Disclosure, Environmental Performance, and Economic Performance: A Simultaneous Equations Approach. *Accounting, organizations and society*, *29*(5), 447-471. Ashforth, B. E., & Gibbs, B. W. (1990). The Double-Edge of Organizational Legitimation. *Organization Science, 1*(2), 177-194.

Berelson, B. (1952), *Content Analysis in Communications Research*. Glencoe, Ill.: The Free Press.

Bewley, K., & Li, Y. (2000). Disclosure of environmental information by Canadian manufacturing companies: A voluntary disclosure perspective. *Advances in Environmental Accounting & Management*, 201-226.

Brammer, S., & Pavelin, S. (2008). Factors influencing the quality of corporate environmental disclosure. *Business Strategy and the Environment*, *17*(2), 120-136. http://dx.doi.org/10.1002/bse.506

Branco, M. C., & Rodrigues, L. L. (2008). Factors Influencing Social Responsibility Disclosure by Portuguese Companies. *Journal of Business Ethics*, *83*(4), 685-701. http://dx.doi.org/10.1007/s10551-007-9658-z

Brown, N., & Deegan, C. (1998). The public disclosure of environmental performance information—a dual test of media agenda setting theory and legitimacy theory. *Accounting and Business Research*, *29*(1), 21-41. http://dx.doi.org/10.1080/00014788.1998.9729564

Buhr, N. (1998). Environmental performance, legislation and annual report disclosure: the case of acid rain and Falconbridge. *Accounting, Auditing & Accountability Journal*, *11*(2), 163-190. http://dx.doi.org/10.1108/09513579810215455

Buhr, N., & Freedman, M. (2001). Culture, Institutional Factors and Differences in Environmental Disclosure Between Canada and the United States. *Critical Perspectives on Accounting*, *12*(3), 293-322. http://dx.doi.org/10.1006/cpac.2000.0435

Campbell, D. (2003). Intra- and intersectoral effects in environmental disclosures: evidence for legitimacy theory? *Business Strategy and the Environment*, *12*(6), 357-371. http://dx.doi.org/10.1002/bse.375

Campbell, D. (2004). A longitudinal and cross-sectional analysis of environmental disclosure in UK companies—a research note. *The British Accounting Review*, *36*(1), 107-117. http://dx.doi.org/10.1016/j.bar.2003.09.001

Cho, C. H., & Patten, D. M. (2007). The role of environmental disclosures as tools of legitimacy: A research note. *Accounting, Organizations and Society*, *32*(7-8), 639-647. http://dx.doi.org/10.1016/j.aos.2006.09.009

Cho, C. H., & Roberts, R. W. (2010). Environmental reporting on the internet by America's Toxic 100: Legitimacy and self-presentation. *International Journal of Accounting Information Systems*, *11*(1), 1-16. http://dx.doi.org/10.1016/j.accinf.2009.12.003

Cho, C. H., Roberts, R. W., & Patten, D. M. (2010). The language of US corporate environmental disclosure. *Accounting, Organizations and Society*, *35*(4), 431-443. http://dx.doi.org/10.1016/j.aos.2009.10.002

Clarke, J., & Gibson-Sweet, M. (1999). The use of corporate social disclosures in the management of reputation and legitimacy: a cross sectoral analysis of UK Top 100 Companies. *Business Ethics: A European Review, 8*(1), 5-13. http://dx.doi.org/10.1111/1467-8608.00120

Cormier, D., & Gordon, I. M. (2001). An examination of social and environmental reporting strategies. *Accounting, Auditing & Accountability Journal*, *14*(5), 587-617. http://dx.doi.org/10.1108/EUM0000000006264

Cormier, D., & Magnan, M. (2003). Environmental reporting management: a continental European perspective. *Journal of Accounting and Public Policy*, *22*(1), 43-62. http://dx.doi.org/10.1016/S0278-4254(02)00085-6

Cowen, S. S., Ferreri, L. B., & Parker, L. D. (1987). The impact of corporate characteristics on social responsibility disclosure: A typology and frequency-based analysis. *Accounting, Organizations and Society*, *12*(2), 111-122. http://dx.doi.org/10.1016/0361-3682(87)90001-8

Craven, B. M., & Marston, C. L. (1999). Financial reporting on the Internet by leading UK companies. *European Accounting Review*, *8*(2), 321-333. http://dx.doi.org/10.1080/096381899336069

Da Silva Monteiro, S. M., & Aibar-Guzmán, B. (2009). Determinants of environmental disclosure in the annual reports of large companies operating in Portugal. *Corporate Social Responsibilty and Environmental Management*, *17*(4), 185-204. http://dx.doi.org/10.1002/csr.197

Darrell, W., & Schwartz, B. N. (1997). Environmental disclosures and public policy pressure. *Journal of Accounting and Public Policy*, *16*(2), 125-154. http://dx.doi.org/10.1016/S0278-4254(96)00015-4

De Villiers, C., & van Staden, C. J. (2006). Can less environmental disclosure have a legitimising effect? Evidence from Africa. *Accounting, Organizations and Society*, *31*(8), 763-781. http://dx.doi.org/10.1016/j.aos.2006.03.001

Deegan, C. (2007). *Australian financial accounting*. McGraw-Hill Higher Education.

Deegan, C., & Gordon, B. (1996). A Study of the Environmental Disclosure Practices of Australian Corporations. *Accounting and Business Research*, *26*(3), 187-199. http://dx.doi.org/10.1080/00014788.1996.9729510

Deegan, C., & Rankin, M. (1996). Do Australian companies report environmental news objectively? *Accounting, Auditing & Accountability Journal*, *9*(2), 50-67. http://dx.doi.org/10.1108/09513579610116358

Deegan, C., Rankin, M., & Tobin, J. (2002). An examination of the corporate social and environmental disclosures of BHP from 1983-1997. *Accounting, Auditing & Accountability Journal*, *15*(3), 312-343. http://dx.doi.org/10.1108/09513570210435861

Deegan, C., Rankin, M., & Voght, P. (2000). Firms' disclosure reactions to major social incidents: Australian evidence. *Accounting forum*, *24*(1), 101-130. http://dx.doi.org/10.1111/1467-6303.00031

Dierkes, M., & Preston, L. E. (1977). Corporate social accounting reporting for the physical environment: A critical review and implementation proposal. *Accounting, Organizations and Society*, *2*(1), 3-22. http://dx.doi.org/10.1016/0361-3682(77)90003-4

DiMaggio, P. J., & Powell, W. W. (1983). The Iron Cage Revisited: Institutional Isomorphism and Collective Rationality in Organizational Fields. *American Sociological Review*, *48*(2), 147. http://dx.doi.org/10.2307/2095101

Dowling, J., & Pfeffer, J. (1975). Organizational Legitimacy: Social Values and Organizational Behavior. *The Pacific Sociological Review*, *18*(1), 122-136. http://dx.doi.org/10.2307/1388226

Earnhart, D. H., Khanna, M., & Lyon, T. P. (2014). Corporate Environmental Strategies in Emerging Economies. *Review of Environmental Economics and Policy*, *8*(2), 164-185. http://dx.doi.org/10.1093/reep/reu001

Fikru, M. G. (2014). International certification in developing countries: The role of internal and external institutional pressure. *Journal of Environmental Management*, *144*, 286-296. http://dx.doi.org/10.1016/j.jenvman.2014.05.030

FTSE4Good IBEX Index Inclusion Criteria. Retrieved from http://www.ftse.com/products/downloads/FTSE4Good_IBEX_Inclusion_Criteria.pdf

Gamble, G. O., Hsu, K., Kite, D., & Radtke, R. R. (1995). Environmental disclosures in annual reports and 10Ks: An examination. *Accounting Horizons*, *9*, 34-34.

Gao, S. S., Heravi, S., & Xiao, J. Z. (2005). Determinants of corporate social and environmental reporting in Hong Kong: a research note. *Accounting Forum*, *29*(2), 233-242. http://dx.doi.org/10.1016/j.accfor.2005.01.002

González-Benito, J., & González-Benito, Ó. (2008). A study of determinant factors of stakeholder environmental pressure perceived by industrial companies. *Business Strategy and the Environment*, *19*(3), 164-181. http://dx.doi.org/10.1002/bse.631

Gray, R., Kouhy, R., & Lavers, S. (1995). Corporate social and environmental reporting. *Accounting, Auditing & Accountability Journal*, *8*(2), 47-77. http://dx.doi.org/10.1108/09513579510146996

Gray, R., Owen D. & Adams, C. (1996). *Accounting and Accountability*. Prentice Hall Europe, Great Britain.

Guthrie, J., & Mathews, M. R. (1985). Corporate social accounting in Australasia. *Research in Corporate Social Performance and Policy*, *7*, 251-277.

Guthrie, J., & Parker, L. D. (1989). Corporate Social Reporting: A Rebuttal of Legitimacy Theory. *Accounting and Business Research*, 19(76), 343–352. http://dx.doi.org/10.1080/00014788.1989.9728863

Guthrie, J., & Parker, L. D. (1990). Corporate social disclosure practice: a comparative international analysis", *Advances in Public Interest Accounting*, *3*, 159-175.

Hackston, D., & Milne, M. J. (1996). Some determinants of social and environmental disclosures in New Zealand companies. *Accounting, Auditing & Accountability Journal*, *9*(1), 77-108. http://dx.doi.org/10.1108/09513579610109987

Halme, M., & Huse, M. (1997). The influence of corporate governance, industry and country factors on environmental reporting. *Scandinavian Journal of Management*, *13*(2), 137-157. http://dx.doi.org/10.1016/s0956-5221(97)00002-x

Harte, G., & Owen, D. (1991). Environmental Disclosure in the Annual Reports of British Companies: A Research Note. *Accounting, Auditing & Accountability Journal*, *4*(3). http://dx.doi.org/10.1108/09513579110144442

Hibbitt, C., & Collison, D. (2004). Corporate environmental disclosure and reporting developments in Europe. *Social and Environmental Accountability Journal*, *24*(1), 1-11. http://dx.doi.org/10.1080/0969160x.2004.9651708

Holland, L., & Boon Foo, Y. (2003). Differences in environmental reporting practices in the UK and the US: the legal and regulatory context. *The British Accounting Review*, *35*(1), 1-18. http://dx.doi.org/10.1016/s0890-8389(02)00127-0

Hrasky, S. (2011). Carbon footprints and legitimation strategies: symbolism or action? *Accounting, Auditing & Accountability Journal*, *25*(1), 174-198. http://dx.doi.org/10.1108/09513571211191798

Jenkins, H., & Yakovleva, N. (2006). Corporate social responsibility in the mining industry: Exploring trends in social and environmental disclosure. *Journal of Cleaner Production*, *14*(3-4), 271-284. http://dx.doi.org/10.1016/j.jclepro.2004.10.004

Kathy Rao, K., Tilt, C. A., & Lester, L. H. (2012). Corporate governance and environmental reporting: an Australian study. *Corporate Governance*, *12*(2), 143-163. http://dx.doi.org/10.1108/14720701211214052

Khanna, M., & Speir, C. (2007). Motivations for proactive environmental management and innovative pollution control. *Urbana*, *51*, 61801.

Kirkman, P., & Hope, C. (1992). *Environmental Disclosure in UK Company Annual Reports*. Cambridge University Press, Cambridge.

Kolk, A., Walhain, S., & Van de Wateringen, S. (2001). Environmental reporting by the Fortune Global 250: exploring the influence of nationality and sector. *Business strategy and the environment*, *10*(1), 15-28. http://dx.doi.org/10.1002/1099-0836(200101/02)10:1<15::aid-bse275>3.0.co;2-y

Kuo, L., & Yi-Ju Chen, V. (2013). Is environmental disclosure an effective strategy on establishment of environmental legitimacy for organization? *Management Decision*, *51*(7), 1462-1487. http://dx.doi.org/10.1108/md-06-2012-0395

Laine, M. (2009). Ensuring legitimacy through rhetorical changes? *Accounting, Auditing & Accountability Journal*, *22*(7), 1029-1054. http://dx.doi.org/10.1108/09513570910987367

Li, Y., Clarkson, P., Richardson, G. D., & Vasvari, F. P. (n.d.). Revisiting the Relation Between Environmental Performance and Environmental Disclosure: An Empirical Analysis. *SSRN Electronic Journal*.

Lindblom, C. K. (1994, June). The implications of organizational legitimacy for corporate social performance and disclosure. *Critical perspectives on accounting conference, New York*.

Lober, D. J., Bynum, D., Campbell, E., & Jacques, M. (1997). The 100 plus corporate environmental report study: A survey of an evolving environmental management tool. *Business Strategy and the Environment*, *6*(2), 57-73. http://dx.doi.org/10.1002/(SICI)1099-0836(199705)6:2<57::AID-BSE81>3.0.CO;2-E

Lodhia, S. (2005). Legitimacy motives for World Wide Web (WWW) environmental reporting: An exploratory study into present practices in the Australian minerals industry. *Journal of Accounting and Finance*, *4*, 1-15.

Luft Mobus, J. (2005). Mandatory environmental disclosures in a legitimacy theory context. *Accounting, Auditing & Accountability Journal*, *18*(4), 492-517. http://dx.doi.org/10.1108/09513570510609333

Magness, V. (2006). Strategic posture, financial performance and environmental disclosure. *Accounting, Auditing & Accountability Journal*, *19*(4), 540-563. http://dx.doi.org/10.1108/09513570610679128

Mahadeo, J. D., Oogarah-Hanuman, V., & Soobaroyen, T. (2011). Changes in social and environmental reporting practices in an emerging economy (2004–2007): Exploring the relevance of stakeholder and legitimacy theories. *Accounting Forum*, *35*(3), 158-175. http://dx.doi.org/10.1016/j.accfor.2011.06.005

Maignan, I., & Ralston, D. A. (2002). Corporate Social Responsibility in Europe and the U.S.: Insights from Businesses' Self-presentations. *Journal of International Business Studies*, *33*(3), 497-514. http://dx.doi.org/10.1057/palgrave.jibs.8491028

Meyer, J. W., & Rowan, B. (1977). Institutionalized Organizations: Formal Structure as Myth and Ceremony. *Am J Sociol*, *83*(2), 340. http://dx.doi.org/10.1086/226550

Meyer, J. W., & Scott W. R. (1983). *Organizational environments: ritual and rationality*. Beverly Hills, CA: Sage.

Meyer, J., & Rowan, B. (1991). Institutionalized Organizations: Formal Structure as Myth and Ceremony. In W. Powell & P. DiMaggio (Eds.), *The New Institutionalism in Organizational Analysis.* Chicago, Illinois: University of Chicago Press.

Meyer, K. E., Estrin, S., Bhaumik, S. K., & Peng, M. W. (2009). Institutions, resources, and entry strategies in emerging economies. *Strategic Management Journal*, *30*(1), 61-80. http://dx.doi.org/10.1002/smj.720

Miles, R. H., & Cameron, K. (1982). *Coffin nails and corporate strategies*. Englewood Cliffs, N.J.: Prentice-Hall.

Milne, M. J., & Patten, D. M. (2002). Securing organizational legitimacy. Accounting, *Auditing & Accountability Journal*, *15*(3), 372-405. http://dx.doi.org/10.1108/09513570210435889

Moneva, J. M., & Llena, F. (2000). Environmental disclosures in the annual reports of large companies in Spain. *European Accounting Review*, *9*(1), 7-29. http://dx.doi.org/10.1080/096381800407923

Nasi, J., Nasi, S., Phillips, N., & Zyglidopoulos, S. (1997). The Evolution of Corporate Social Responsiveness: An Exploratory Study of Finnish and Canadian Forestry Companies. *Business & Society*, *36*(3), 296-321. http://dx.doi.org/10.1177/000765039703600305

Neu, D., Warsame, H., & Pedwell, K. (1998). Managing Public Impressions: Environmental Disclosures in Annual Reports. *Accounting, Organizations and Society*, *23*(3), 265-282. http://dx.doi.org/10.1016/s0361-3682(97)00008-1

Niskala, M., & Pretes, M. (1995). Environmental reporting in Finland: A note on the use of annual reports. *Accounting, Organizations and Society*, *20*(6), 457-466. http://dx.doi.org/10.1016/0361-3682(94)00032-q

Niskanen, J., & Nieminen, T. (2001). The objectivity of corporate environmental reporting: a study of Finnish listed firms' environmental disclosures. *Business Strategy and the Environment*, *10*(1), 29-37. http://dx.doi.org/10.1002/1099-0836(200101/02)10:1<29::AID-BSE268>3.0.CO;2-D

O'Donovan, G. (2002). Environmental disclosures in the annual report. *Accounting, Auditing & Accountability Journal*, *15*(3), 344-371. http://dx.doi.org/10.1108/09513570210435870

Patten, D. M. (1991). Exposure, legitimacy, and social disclosure. *Journal of Accounting and Public Policy*, *10*(4), 297-308. http://dx.doi.org/10.1016/0278-4254(91)90003-3

Patten, D. M. (1992). Intra-industry environmental disclosures in response to the Alaskan oil spill: A note on legitimacy theory. *Accounting, Organizations and Society*, *17*(5), 471-475. http://dx.doi.org/10.1016/0361-3682(92)90042-q

Patten, D. M. (2002). The relation between environmental performance and environmental disclosure: a research note. *Accounting, Organizations and Society*, *27*(8), 763-773. http://dx.doi.org/10.1016/s0361-3682(02)00028-4

Patten, D. M., & Crampton, W. (2003). Legitimacy and The Internet: An Examination of Corporate Web Page Environmental Disclosures. *Advances in Environmental Accounting & Management*, 31-57. http://dx.doi.org/10.1016/s1479-3598(03)02002-8

Pellegrino, C., & Lodhia, S. (2012). Climate change accounting and the Australian mining industry: exploring the links between corporate disclosure and the generation of legitimacy. *Journal of Cleaner Production*, *36*, 68-82. http://dx.doi.org/10.1016/j.jclepro.2012.02.022

Pfeffer, J. (1981). Management as symbolic action: The creation and maintenance of organizational paradigms. *Research in organizational behavior*, *3*(1), 1-52.

Rahaman, A. S., Lawrence, S., & Roper, J. (2004). Social and environmental reporting at the VRA: institutionalised legitimacy or legitimation crisis? *Critical Perspectives on Accounting*, *15*(1), 35-56. http://dx.doi.org/10.1016/s1045-2354(03)00005-4

Rankin, M. (1996). *Corporate Reporting—the Green Gap*. The Institute of Chartered Accountants in Australia, Sydney.

Roberts, R. W. (1992). Determinants of corporate social responsibility disclosure: An application of stakeholder theory. *Accounting, Organizations and Society*, *17*(6), 595-612. http://dx.doi.org/10.1016/0361-3682(92)90015-k

Sahay, A. (2004). Environmental reporting by Indian corporations. *Corp. Soc. Responsib. Environ. Mgmt*, *11*(1), 12-22. http://dx.doi.org/10.1002/csr.51

Sethi, S. P. (1977). *Advocacy advertising and large corporations: Social conflict, big business image, the news media, and public policy*. Lexington, MA: D. C. Heath.

Stittle, J., Machota Blas, M., & Martinez Conesa, I. (1997). Environmental reporting in Europe: an analysis of UK and Spanish developments. *European Business Review*, *97*(5), 215-223. http://dx.doi.org/10.1108/09555349710179825

Suchman, M. C. (1995). Managing Legitimacy: Strategic and Institutional Approaches. *Academy of Management Review*, *20*(3), 571-610. http://dx.doi.org/10.5465/amr.1995.9508080331

Tagesson, T., Blank, V., Broberg, P., & Collin, S.-O. (2009). What explains the extent and content of social and environmental disclosures on corporate websites: a study of social and environmental reporting in Swedish listed corporations. *Corp. Soc. Responsib. Environ. Mgmt*, *16*(6), 352-364. http://dx.doi.org/10.1002/csr.194

Tilling, M. V., & Tilt, C. A. (2010). The edge of legitimacy. *Accounting, Auditing & Accountability Journal*, *23*(1), 55-81. http://dx.doi.org/10.1108/09513571011010600

Tilt, C. A. (1994). The Influence of External Pressure Groups on Corporate Social Disclosure. *Accounting, Auditing & Accountability Journal*, *7*(4), 47-72. http://dx.doi.org/10.1108/09513579410069849

Tilt, C. A. (2001). The content and disclosure of Australian corporate environmental policies. *Accounting, Auditing & Accountability Journal*, *14*(2), 190-212. http://dx.doi.org/10.1108/09513570110389314

Wilmshurst, T. D., & Frost, G. R. (2000). Corporate environmental reporting. *Accounting, Auditing & Accountability Journal*, *13*(1), 10-26. http://dx.doi.org/10.1108/09513570010316126

Wiseman, J. (1982). An evaluation of environmental disclosures made in corporate annual reports. *Accounting, Organizations and Society*, *7*(1), 53-63. http://dx.doi.org/10.1016/0361-3682(82)90025-3

Zeghal, D., & Ahmed, S. A. (1990). Comparison of Social Responsibility Information Disclosure Media Used by Canadian Firms. *Accounting, Auditing & Accountability Journal*, *3*(1). http://dx.doi.org/10.1108/09513579010136343

Zucker, L. (1987). Institutional Theories of Organization. *Annual Review of Sociology*, *13*(1), 443-464. http://dx.doi.org/10.1146/annurev.soc.13.1.443

Notes

Note 1. This classification is based on FTSE4Good Indexes Sector Classification. All companies are classified as high, medium or low impact based on sector classification and business activities (FTSE4Good IBEX Index Inclusion Criteria).

Note 2. *High Impact Sectors:* Agriculture, Air Transport, Airports, Building Materials, Chemicals and Pharmaceuticals, Construction, Major Systems Engineering, Fast Food Chains, Food, Beverages and Tobacco, Forestry and Paper, Mining and Metals, Oil and Gas, Power Generation, Road Distribution and Shipping, Supermarkets, Vehicle Manufacture, Waste, Water, Pest Control; *Medium Impact Sectors:* DIY and Building Supplies, Electronic and Electrical Equipment, Energy and Fuel Distribution, Engineering and Machinery, Financials not elsewhere classified, Hotels, Catering and Facilities Management, Manufacturers not elsewhere classified, Ports, Printing and Newspaper Publishing, Property Developers, Retailers not elsewhere classified, Vehicle Hire, Public Transport; *Low Impact Sectors:* Information Technology, Media, Consumer/Mortgage Finance, Property Investors, Research and Development, Leisure not elsewhere classified, Support Services, Telecoms, Wholesale Distribution

Note 3. The content categories of this dimension were developed based on the Global Reporting Initiative's Sustainability Reporting Guidelines (GRI, 2006). The GRI Reporting Framework is intended to serve as a generally accepted framework for reporting on an organization's economic, environmental, and social performance. The GRI Reporting Framework contains general and sector-specific content that has been agreed by a wide range of stakeholders around the world to be generally applicable for reporting an organization's sustainability performance.